DATE: December 15, 2015

TO: R6 UDO

FROM: R6 DIVER

SUBJECT: DIVE REPORT (Event 01):
December 9-10, 2015
San Jacinto Waste Pits (SJWP) SF Site, Harris Co. (Channelview), TX

BACKGROUND

The San Jacinto River Waste Pit Site history has been documented in several documents prepared for, submitted to, and approved by the EPA, which will not all be repeated here. In brief, paper mill wastes were disposed in impoundments about 14 acres in size at the site in the 1960's resulting dioxin and furan contamination in the adjacent waterbody of the San Jacinto River. The impoundments/waste pits are situated on a 20 acre parcel immediately north of Interstate Highway 10 (I-10) at the I-10 bridge over I-10 and on the west bank of the river.

Pursuant to an EPA-issued Unilateral Administrative Order, International Paper Company (IPC) undertook a Time Critical Removal Action (TCRA). As a central component of that action, IPC and MIMC and McGinnes Industrial Maintenance Corporation (MIMC) implemented action to stabilize the waste pits and to install the TCRA Cap. The original 1966 boundaries of the northern impoundments/waste pits and impacted area extend into the current basin of the San Jacinto River, and thus a portion of the cap is underwater in depths extending to a maximum of about 16 feet. The TCTA Cap is designed to prevent the migration of dioxins and furans from the historic boundaries of the northern impoundment into the San Jacinto River and its sediments.

INTRODUCTION

This report covers the first of four anticipated, interrelated diving operations at the San Jacinto River Waste Pits Superfund Site in Harris County, Texas where Interstate Highway 10 (I-10) bridge crosses the San Jacinto River. This first diving operation is to serve two primary purposes: (1) investigate the physical integrity of the multilayer impermeable cap installed over waste pits as part of the Time Critical Removal Action (TCRA); hereinafter referred to as the "TCRA Cap", and (2) to implement and validate procedures that will be used for the installation and retrieval of TCRA Cap pore water sampling devices during the full investigation of ongoing performance of the TCRA Cap (dive operations 2 through 4).

PURPOSE

TCRA Cap installation was completed in July 2011. The current investigation (and the portion assisted by the U.S. EPA dive teams from Region 6 and ERT) is designed to safely assess ongoing TCRA Cap integrity and performance as measured by the continued physical integrity of the cap and its boundaries and also the absence of detectable migration of dioxin and furans from the waste pit beneath the Cap and into the San Jacinto River.

Divers will be used to visually inspect TCRA Cap integrity, particularly at the Cap perimeter to determine if the hard armor (gravel and stones place over the cap) are remaining in place and if the boundaries are maintaining integrity as installed. Diver observations will be supplemented by GPS coordinate and depth measurements, and by side Dual-Frequency Imaging Sonar or Acoustic Camera. Visibility is anticipated to be very poor, but an attempt will be made to collect photographic images.

Commented [HA1]: Dual-Frequency Imaging Sonar or Acoustic Camera

The entire investigation will entail placement and retrieval of Solid Phase Micro-Extraction (SPME) sampling devices designed to passively collect dioxin and furan pollutants in the pore water of the interstitial spaces of the hard armor cover of the Cap. This first diving operation will focus simply on verifying effective techniques for installing, securing, and then retrieving such sampling devices.

ACTIVITIES

Tuesday 12/8/15. Travel day and supply shopping for Alan Humphrey (ERT), Brandi Todd (R6), Valmichael Leos (R6). Bill Luthans (R6), and Nick Gannon (R6). The logistics for the following day's activities were discussed.

Wednesday, 12/9/15. The EPA divers, RPM, PRPs and BESI personnel mobilized to a marina near the site. A 20-foot aluminum boat was launched by the BESI. Following equipment loading, a H&S meeting, and travel to the site (approx.1 mile), primary and backup diver preparations began on board. By XX:YY a R6 diver was in the water to begin the Cap inspection. The diver, directed by topside staff, traversed the edge of the Cap and reported its condition. A portable T-bar was used to assess silt buildup, Cap presence (or absence) and the Cap edge. Several GPS locations and map objections were noted.

Thursday, 12/10/15. Staff personnel mobilized to the site for preparations similar to the previous day. Side scan sonar equipment was prepared along with the divers. A portion of the Cap, visited the previous day, was investigated from the boat using a calibrated pole. Cap conditions and depths were identified and recorded. Side-scan sonar was used to visually inspect and record the Cap edge and identify any anomalies. A R6 diver, equipped for shallow water wading, along with another staff in a Jon boat, examined a large submerged portion of the Cap. This team also tested equipment and procedures for future SPME shallow water sampler insertions. A R6 diver also practiced deep water sampler insertion, marking, and retrieval.

Post dive activities included de-con, equipment storage and shipping. Staff began returning to Dallas, New Jersey and Houston.

ANOMALIES and RECOMMENDATIONS

At the completion of this project, a review of the procedures and equipment was conducted. There were no malfunctions of the dive gear to report. This includes diver full face masks, sonar unit, dry suits, and hard wired communications gear. The tender, who also served as the standby diver, was not required to enter the water to assist the primary diver.

Day 1 - Difficulties included shallow water, zero visibility, a soft bottom, river currents, air pollution, and an unstable boat ladder.

Day 2 - Difficulties included mobility and stability during shallow water wading, tethered T-bar operation, and buoy handling during sampler insertion.

The dive ladder was replaced on the second day after access difficulties. OTC work boots were employed to assist the wading diver over uneven Cap surfaces. It is recommended that additional balance/stability assists are used during future sampler deployment events. Communication with barge traffic control will be needed for work on the industrial traffic side of the site.

REFERENCES

EPA R6 Dive Safety Plan: San Jacinto River Waste Pits Superfund Site**,** Harris County (Channelview) TX (12/08 – 12/11/15)